TCF2008 Offers Special Programs for Educators

The Trenton Computer Festival (TCF) was started back in 1976 to educate the public about the coming revolution in computers. The concept of computers in the home seemed so extraordinary back then that the first TCF was featured on the front page of the New York Times. Much has changed in the 33 years since that initial TCF, but the festival's commitment to education has remained constant. Today one of the major problems facing our country is the lack of young people entering the fields of science and engineering. Turning around this issue is one of the missions of TCF. Funds from TCF are used to support The College of New Jersey, School of Engineering Scholarships. The TCF Robotic Competitions were initiated to introduce students to challenge and joy of design. Some of TCF's talks and workshops are intended for teachers and parents to help them turn on their students and children to science and engineering.

Technological change has become part of our daily lives. Educators need to embrace and incorporate new technologies into their classes, if they are to attract students to the study of science and engineering. However, many educators have no formal training in these new disciplines, and face the question of how to deliver such content while also teaching students the basic skills they need.

James Dyer and Katherine Herbert from Montclair State University will be conducting a hands-on workshop for science and math teachers on *bioinformatics*, the technology that enabled the decoding of the human genome. It combines biology, chemistry, mathematics and computer science in an interdisciplinary approach to solve some of life's most difficult problems. Without Bioinformatics many of the genomic and pharmaceutical advances, so much in the public eye, would not have been possible.

Their workshop will take place on Saturday, starting at 10:15 am in Armstrong Hall 156, and deals with how to bring *bioinformatics* into the classroom. Discussion will be accompanied by detailed examples of activities that can be done with students in middle school and high school at varying knowledge and skill levels. Workshop participants will be in a computer lab facility and have Internet access. About a third of the time will be spent using web-based bioinformatics tools. The rest of the time will focus on using molecular model kits to build amino acid and peptide models, and on introducing related basic mathematical calculations. Educators should come away from this workshop with several hands-on activities that can be readily incorporate into their classes.

James Dyer is an assistant professor in the Chemistry and Biochemistry Department at Montclair State University (MSU). He has experience teaching high school chemistry and physics. Katherine Herbert is an assistant professor in the MSU Computer Science Department specializing in bioinformatics.

Other talks of interest to educators will be given by Eva Kaplan and by Mark Streitman.

Eva, who has worked both as an art and as a computer teacher and presently runs the Pennington Computer School and Computers + Kids Summer Camp, talk's title is *2008's*

Newest and Best Search Engines, Websites & Software plus Videos, Amazing Robots and more!. She will uncover a treasure chest of new search engines and websites that will be of especial interest to teachers. Eva will also demonstrate and speak on early to current films about computers and robots that are available for class room use on VHS or DVD. Complete resource handouts will be provided at the seminar.

Although Mark's talk is entitled *Science and Computers at Home*, much of the information will be valuable to teachers involved with science education. He will tell how to use computers to enhance science knowledge and where on the Internet to look at the latest science discoveries. Mark will show some science making history in real-time and how to make real discoveries using data that has been gathered and available on-line. To illustrate some of the science resources found on the Internet, he will present a 3D science slide show. Mark Streitman is an Engineer and amateur scientist, who is the President of the New Jersey Chapter of The Society for Amateur Scientists. He has done many of his own experiments over the years and fell in love with science from watching the Space Program in the 1960's. He created the world's first Portable Foucault Pendulum for purchase and has a degree in Physics from Rutgers.

The 33rd Annual Trenton Computer Festival will be held on April 26-27, 2008 at The College of New Jersey in Ewing, New Jersey. Show hours on Saturday, April 26th are 10 am to 5 pm. Sunday show hours are 10 am to 4 pm. The flea market opens at 9 am both days and will be a Rain or Shine event. Indoor exhibits will be held in the Student Recreation Center and speaker sessions will be held in campus classrooms and in the Brower Student Center.

TCF offers a weekend of computer entertainment including shopping, socializing and essential free education (at no extra charge) in the form of seminars (50 minutes), workshops (110 minutes) and interactive demonstrations. TCF also includes a Friday Information Technology (IT) Professional Conference with Saturday sessions open to regular TCF attendees. More than 75 seminars and workshops will be presented over the TCF weekend covering topics including the latest in computers and consumer electronics technology, digital cameras, video, HD TV, VoIP, MP3 and much more. The keynote speaker, David Perry will talk on ***Identity Theft***.

A two-day TCF admission pass is $12.50 if purchased in advance at http://www.tcf-nj.org/, but will be available at the door for $17. Passes for Sunday only are available for $12 at the door.

The IT Professional Conference is from 9 am to 5 pm on Friday, April 25th and is part of TCF's sessions on Saturday, April 26th – for more information and registration details see http://princetonacm.acm.org/tcfpro/.

For advance tickets or additional information, please call the Trenton Computer Festival show management office at (201) 825-2229 or visit http://www.tcf-nj.org/ for more information.